

Appl. No. 10/649,281
Amdt. dated December 16, 2004
Reply to Office action of September 16, 2004

REMARKS/ARGUMENTS

Summarizing this amendment, claims 1 and 17 have been amended, whereas claims 2-16 and 18-24 remain unchanged. Thus, claims 1-24 are again presented for the examiner's consideration.

Somehow the examiner found everything set forth in independent claims 1 and 17 in U.S. patent 6,397,657 (Kroll), save for a torque arm between the one end of the torsion bar to be tested and the force measuring unit. That the examiner found in U.S. patent 4,561,580 (Trail). Having found all of the elements to her satisfaction, the examiner concluded that applicant's apparatus for determining the spring rate of a torsion bar as set forth in those claims was obvious. Applicant disagrees, but even so has amended independent claims 1 and 17 to better distinguish over the Kroll patent.

Claim 1 calls for a frame having two channels, each of which defines having an axis for receiving a torsion bar. Claim 17 is similar, but actually requires the torsion bar in one of the channels. In any event, the claims now specify that the two channels are not aligned or that the axes of the two channels are not aligned. The claims go on to require that the apparatus also includes a force applicator, at one end of the frame, a force measuring unit at the other end of the frame, a first torsion arm for coupling one end of the torsion bar to the force application and a second torsion arm for coupling the torsion bar with the measuring unit.

The Kroll patent shows a framework having a load cell 14 to which one end of a torsion bar T attaches and an adapter 76 to which the other end is secured. A jack piston 104 operates through a torque arm 18 to rotate the adapter 76 and thereby twist the torsion bar T. Nowhere does the Kroll patent suggest two channels, much less two channels that lie along nonaligned axes as claims 1 and 17 now require. The two channels permit testing in both directions of twist, all with a device considerably more compact than the machine of the Kroll patent.

As the examiner recognizes, the Kroll patent does not show a second torsion arm between the torsion bar and the measuring unit, but instead shows a load cell at the very end of the torsion bar. To conclude that the Trail patent would inspire one skilled in the art to provide this missing element seems highly speculative at best. The Trail patent has nothing whatsoever to do with measuring the spring rates of torsion bars. Instead, it concerns maintaining tension on synthetic filaments as they are drawn from a die. One skilled in the art of designing testing equipment for torsion bars would not turn to the Trail patent for inspiration. Even if such a person did, no suggestion exists in either the Kroll or Trail patents as to how an element of the Trail patent is to be incorporated into the Kroll patent to meet applicant's testing apparatus as set forth in claims 1 and 17.

In order to support a prima facie case of obviousness based on a combination of references, the references must provide a suggestion and motivation for combining

them. A hindsight reconstruction will not suffice. The fact that references can be combined or even modified is not sufficient to establish prima facie obviousness. The references must suggest the desirability of the combination, MPEP 2143.01.

Here, the Kroll patent does not meet claim 1 and 17, and it requires a good measure of imagination to somehow reach the examiner's conclusions as to what it does respond. Apart from that, the Kroll patent does not resemble applicant's apparatus with its two axes as set forth in claims 1 and 17. The Trail patent resembles applicant's apparatus even less and has no relation to the Kroll patent. The two patents do not fit logically together to produce anything, and they certainly do not fit together to meet applicant's testing apparatus as set forth in claims 1 and 17. Hence, those claims satisfy the requirements of 35 USC 102 and 103 and should be allowed.

Claims 2-13 depend from claim 1, whereas claims 18-24 depend from claim 17. They are allowable for the reasons previously advanced.

Independent claim 14 primarily addresses the force applicator and how the torque arm that is rotated by it cooperates with it. The claim specifies that the force applicator has a drive surface that contains a depression, and that the torque arm has an adjusting screw that is adjustable laterally to initially seat in the depression and then move out of the depression as the drive surface elevates. The examiner somehow finds the very specific structure of claim 14 in the Kroll and Trail patents.

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As previously observed, the Trail patent does not combine with the Kroll patent to produce anything, much less an improved apparatus for testing torsion bars. Insofar as the depression is concerned, the trail patent at 76 shows a stop screw, not the depression to which the examiner alludes. Besides that, the screw is use in a totally different context and would not inspire one of ordinary skill in the art to produce the very specific structure for the drive element and its surface and the swivel and its adjusting screw as set forth in claim 14.

Claims 15 and 16 depend from claim 14 and are believed to be allowable for the reasons advanced in the discussion of that claim.

In view of the foregoing, favorable consideration and allowance of 24 claims – namely, claims 1-24 – are respectfully requested.

Respectfully submitted,



Edward A. Boeschenstein
Reg. No. 22,986
Polster, Lieder, Woodruff & Lucchesi, L.C.
12412 Powerscourt Drive, Ste. 200
St. Louis, MO 63131
Phone (314) 238-2400
Fax (314) 238-2401